



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,516	11/03/2003	Yasuki Fukui	1035-477	9434
23117	7590	02/02/2006	EXAMINER	
NIXON & VANDERHYE, PC			NGUYEN, CUONG QUANG	
901 NORTH GLEBE ROAD, 11TH FLOOR			ART UNIT	PAPER NUMBER
ARLINGTON, VA 22203			2811	

DATE MAILED: 02/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/698,516	FUKUI ET AL.	
	Examiner Cuong Q. Nguyen	Art Unit 2811	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.
 - 4a) Of the above claim(s) 2,4-6,8,10-12 and 14-16 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,7,9 and 13 is/are rejected.
- 7) Claim(s) 3 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11-3-03 12-9-05</u>	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

Election/Restriction

1. Applicant's election without traverse of Embodiment 1, claims 1, 3, 7, 9, 13 and 15 is acknowledged. However, claim 15 is a method claim which has been withdrawn from previous election.

Claim Objection

2. Claims 1, 3, 7, 9, and 13 are objected to because of the following informalities: all the limitation which related to "third semiconductor chip" should be deleted from claim 1 because elected embodiment 1 (Fig.1(a) to Fig.2(b) does not include the third semiconductor chip. Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, 9 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Symons (US 6,337,226).

Regarding claim 1, Symons discloses a semiconductor device comprising: a first semiconductor chip (31) and a second semiconductor chip (33), each of which has a circuit formation surface and a reverse surface with respect to the circuit formation surface, the first semiconductor chip mounted on a circuit substrate (30) in such a manner that the reverse surface of the first semiconductor chip faces the circuit substrate; the second semiconductor chip being mounted on the first semiconductor chip in such a manner that the reverse surface of the second semiconductor chip faces the circuit formation surface of the first semiconductor chip, and having protruded part (33A) formed by protruding at least one outer edge of the second semiconductor chip from an outer edge of the first semiconductor chip, the first semiconductor chip and the second semiconductor chip being wire-bonded with the circuit substrate; the semiconductor device comprising a mounting-use bonding layer (32) on the reverse surface of the second semiconductor chip, and the mounting-use bonding layer functioning as a semiconductor bonding agent for mounting the second chip on the first semiconductor chip, and filling a gap between the circuit substrate and the protruded part of second semiconductor chip. See Symons' Fig.3 and Fig.4.

Regarding claims 7 and 9, Symons teaches that the mounting-use bonding layer (32) is form of an epoxy resin (col.4 lines 15-20).

Regarding claim 13, it is known in the art that epoxy resin is a liquid resin.

Allowable Subject Matter

2. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
3. The following is an examiner's statement of reasons for allowance: Symons appears to be the closest prior art reference. However, this reference fails to teach that a surface of the mounting-use bonding layer has the same shape as the reverse surface of the second semiconductor chip. Prior art of record fails to teach or suggest to incorporate these limitations into Symons to arrive at the claimed device.

Conclusion

4. Papers related to this application may be submitted to Technology center (TC) 2800 by facsimile transmission. Papers should be faxed to TC 2800 via the TC 2800 Fax center located in Crystal Plaza 4, room 4-C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Group 2811 Fax Center number is (703) 872-9306. The Group 2811 Fax Center is to be used only for papers related to Group 2811 applications.
5. Any inquiry concerning this communication or any earlier communication from the Examiner should be directed to CUONG Q NGUYEN whose telephone number is (571) 272-1661. The Examiner is in the Office generally between the hours of 6:30 AM to 5:00 PM (Eastern Standard Time) Monday through Thursday.

Art Unit: 2811

6. If attempts to reach the examiner by telephone are unsuccessful, the primary examiner Steven Loke who can be reached on (571) 272-1657.

7. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center Receptionists whose telephone number is 308-0956.



Cuong Nguyen

Primary examiner

12/7/05